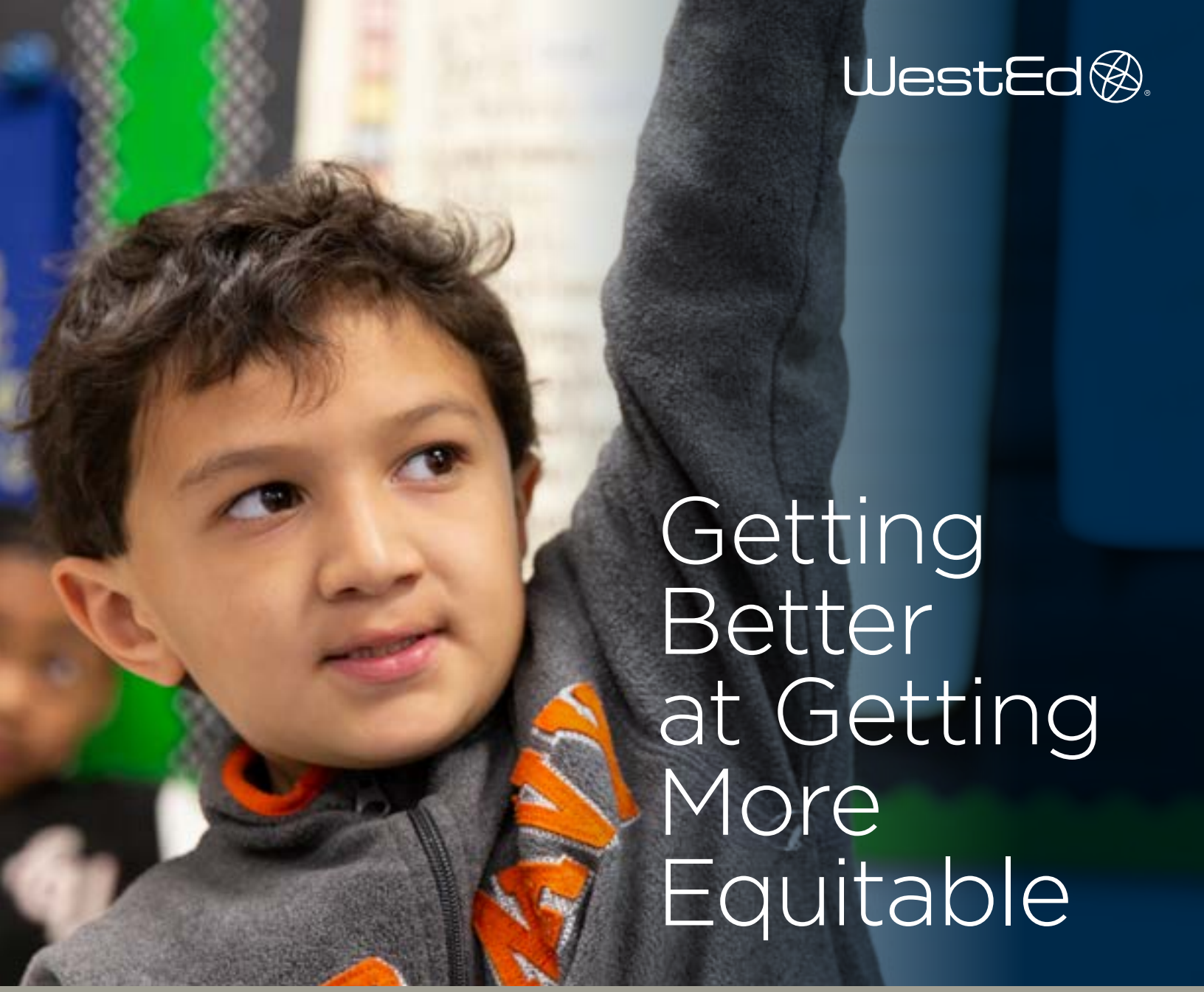

WestEd

Getting Better at Getting More Equitable

Opportunities and Barriers for Using Continuous Improvement to Advance Educational Equity

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Introduction

In California and across the United States, the K–12 education system continues to perpetuate disparities in learning experiences and outcomes for students, based on race/ethnicity, language, income, and ability, to name a few. In California, African American students, students learning English, students with disabilities, students in foster care, and students who are homeless each scored more than 45 points below the standard on the Smarter Balanced Summative Assessment for English language arts/literacy, and students who are economically disadvantaged scored 30 points below the standard, in 2018–19 (California Department of Education, 2017). Additionally, African American students have the highest rates of chronic absenteeism and are more likely to be suspended, relative to their peers from other racial/ethnic groups (Petek, 2020). Students of color and socioeconomically disadvantaged students also have less access to qualified, experienced teachers (Adamson & Darling-Hammond, 2011; Cardichon et al., 2020), and less access to high-quality learning materials (U.S. Department of Education Office for Civil Rights, 2014) and facilities (Filardo et al., 2006), compared to their white peers and their socioeconomically advantaged peers. School districts serving the largest populations of African American, Latino, and/or Native American students received approximately $1,800, or 13 percent, less per student in state and local funding than those schools serving the fewest students of color (Morgan & Amerikaner, 2018).

These educational experiences and outcomes are rooted in a legacy of inequitable treatment and opportunity in the United States public education system (Tatum, 2008). African American children were denied the right to education from the beginning of public schooling through the nineteenth century; Chinese American children were excluded from public schools in the mid- to late nineteenth century; Native American children and Mexican American children faced forced assimilation and Americanization during the late nineteenth and early twentieth centuries; and schools across the country were segregated based on race until *Brown v. Board of Education* in 1954. Today, de facto segregation and other systemic inequities persist (Lewis & Diamond, 2015). Some research indicates that structural racism — "a system of hierarchy and inequity" that creates "preferential treatment, privilege and power for white people at the expense of Black, Latino, Asian, Pacific Islander, Native American, Arab and other racially oppressed people" (Lawrence & Keleher, 2004, p. 1) — contributes to inequity in the education system (see, for example, Vaught & Castagno, 2008; Urban Institute, n.d.).

Educational inequity is characterized by unfair treatment, unequal opportunity, and unequal access to information and resources in the education system. Research suggests that addressing educational inequity requires reflecting upon

and investigating current systems, and using this learning to improve them (Lewis & Diamond, 2015; Kania et al., 2018). This includes exploring policies, practices, resource flows, relationships, power dynamics, and mental models in a system (Kania et al., 2018). As Lewis and Diamond (2015) explain in their investigation of inequity in a diverse, well-resourced comprehensive high school:

> *School leaders can carefully diagnose the causes of specific outcomes in their schools and engage in purposeful design and redesign of organizational routines to facilitate different outcomes. Such an approach helps us move beyond accusation and blame and toward equity-based practices that can transform educational outcomes. (p. 176)*

Continuous improvement offers a disciplined approach to this type of system analysis and improvement.

Continuous improvement: A potential approach to advancing equity in education

Continuous improvement supports system stakeholders to see, understand, and transform complex systems (Bryk et al., 2015). In this paper, *continuous improvement* is used as an umbrella term that captures a range of disciplined system improvement methodologies, including improvement science and human-centered design. These methodologies share a common purpose: to learn about the experiences of those who are directly impacted by systems, and to use that learning to design better systems with and for those directly impacted by the systems within which they operate.

Some believe that continuous improvement offers a promising strategy to recognize — and then dismantle — both explicit and implicit inequities rooted in education systems, such as inequities related to policies, practices, resource flows, relationships, power dynamics, and mental models (Bryk, 2017; Kania et al., 2018; Lee & Riordan, 2018; O'Day & Smith, 2019). However, others have noted that, despite some progress, current continuous improvement efforts in California are insufficient to address persistent inequities in the state's education systems (Fullan et al., 2019; Plank et al., 2018).

To improve understanding of how continuous improvement is being used to advance educational equity, this paper looks closely at the strengths and weaknesses of current continuous improvement approaches for advancing educational equity. It presents findings based on interviews with leaders at different levels of California's education system.

Continuous improvement and educational equity in California

Many practitioners in California were first exposed to continuous improvement through the statewide system of support, a central component of California's accountability and continuous improvement system. As defined by the California Department of Education (n.d.), "the overarching goal of California's system of support is to help local educational agencies

Defining educational equity

As is true of continuous improvement, numerous definitions of educational equity exist in the field. The study team adopted the definition of educational equity employed by the National Equity Project, an organization that has been at the forefront of efforts to improve educational equity in California and beyond: "Educational equity means that each child receives what they need to develop to their full academic and social potential" (National Equity Project, n.d.). Many system changes are required to meet the goal described in this definition, including ensuring that appropriate resources are distributed to meet each student's needs and implementing intrapersonal, interpersonal, and systemic transformations to create a supportive and rigorous learning environment that allows each child to thrive.

and their schools meet the needs of each student they serve, with a focus on building local capacity to sustain improvement and to effectively address disparities in opportunities and outcomes." The system of support is guided by continuous improvement principles and methods, to help school districts improve. For example, county offices of education are using continuous improvement strategies to provide differentiated assistance[1] to school districts, such as needs assessments and root-cause analyses, to help school district leaders and stakeholders investigate

1 Differentiated assistance consists of individually designed assistance to address performance issues and achievement gaps.

What is continuous improvement?

Continuous improvement efforts generally involve some variation of the following iterative cycle of activities:

- Facilitating investigative processes (e.g., empathy interviews, root-cause exercises) to understand a problem and the system that produces it
- Focusing learning efforts to develop shared aims for improvement
- Generating or gathering ideas for change
- Iteratively testing changes at a small scale before eventually bringing them to full and reliable implementation

There are many definitions for continuous improvement across the literature, but continuous improvement is often used as an umbrella term to capture a range of disciplined system-improvement methodologies, including improvement science, networked improvement communities, Lean, Six Sigma, and Design-Based Implementation Research. These methodologies share a common approach of empirically testing changes to a system by focusing on improving the interactions of people, processes, materials, and norms toward a common goal. This approach calls for centrally including the voices of those at the front lines of the system (e.g., teachers) and of those who use the system (e.g., students, families) in order to guide the work.

With this focus on including the voices of key stakeholders, and in some other aspects, continuous improvement draws heavily on design-thinking approaches to innovation. Design-thinking approaches have at their core a search for new ideas and prototypes through understanding users' experiences and through developing empathy.

Organizations that adopt continuous improvement as their approach to learning and improvement are often characterized by the following:

- Shared, evidence-based processes and practices
- Shared responsibilities, organizational goals, and priorities
- A shared improvement methodology
- A data infrastructure that provides feedback tied to organizational outcomes
- A culture and discipline of learning from failures and near-failures
- Leadership practices that build and sustain a continuous-improvement culture

and understand why the system is producing current outcomes, and to use that understanding to begin identifying potential interventions.

While it is known that K–12 education leaders are increasingly using continuous improvement approaches for school and district improvement efforts, less is known about how system leaders are using, or supporting the use of, continuous improvement to advance educational equity — and about what leaders might be struggling with or what might be working well. In fact, despite an increasing focus on continuous improvement in California and across the country, there is limited research demonstrating what effective use of continuous improvement as an intentional and primary lever for increasing educational equity looks like in practice.

This study

To help address this knowledge gap, WestEd, with support from the Stuart Foundation, conducted research to understand the ways in which education leaders are thinking about and using continuous improvement to advance educational equity in California. This paper builds on a 2017 report by Policy Analysis for California Education (PACE) and WestEd, describing the strengths and barriers to implementing continuous improvement in California (Hough et al., 2017), to look more deeply into how continuous improvement is being used to address persistent inequities that impact students of color and other underserved student groups.

This paper describes findings from a set of interviews conducted in fall 2019 with 21 leaders from various state education agencies, county offices of education, school districts, schools, technical assistance (TA) organizations, and other nonprofit organizations from across California. (See Appendix A for a description of the research methodology.) Our analysis of interviews suggests that despite the tremendous value and potential that many education leaders see for continuous improvement to advance educational equity, few of these leaders' educational organizations have fully embraced continuous improvement as a strategy to move toward equity. Furthermore, education leaders repeatedly cautioned against the idea that current continuous improvement methodologies, as they are practiced, are sufficient on their own to reduce disparities in student outcomes. Rather, education leaders asserted the need for equity to be a more intentional and integrated aspect of a continuous improvement approach than it is currently. This paper also outlines barriers and challenges faced by education leaders in using continuous improvement to advance educational equity, and illuminates some of the promising practices emerging from the field. It concludes with a discussion of the implications for the field of current continuous improvement implementation efforts, as well as some additional considerations for continuous improvement to advance educational equity.

Education Leaders Believe in the Potential of Continuous Improvement to Advance Educational Equity

Interviews with our sample of education leaders revealed their strong belief in the potential of a continuous improvement approach to improve educational equity. Leaders specifically noted the potential of continuous improvement for amplifying the voices of those who have been traditionally excluded from consequential decisions in education and for creating a structure for inquiry and investigation of the root causes of inequities in education systems. However, as described in the following *Promising Practices* text boxes and in the *Barriers and Challenges* section, our findings also revealed that although leaders expressed belief in the potential of continuous improvement to advance educational equity, they cautioned that it can only do so if it is applied thoughtfully, with an intentional equity commitment, and if stakeholders are meaningfully and substantively included in the process.

Identifying inequities and "seeing the system"

Part of the continuous improvement process involves conducting investigations to identify and better understand what problems exist and what might be contributing to these problems in the system. Accordingly, education leaders noted that continuous improvement can help to reveal where inequities exist in the education system and that it offers processes for understanding the root causes of these inequities. As one county leader noted:

> *[Educational inequities] come out . . . And once something's called to our attention, we really want to know why. Why is that happening, and what is it that I, as a leader, can do to change the system? . . . Continuous improvement would bring that to light with a root-cause analysis.*

Another leader noted, "For me, absolutely, continuous improvement is a strategy, a tool, a mindset, that has the potential to significantly change education if it's done well . . . We've seen that if continuous improvement is done well, it actually unearths issues of equity." A state leader agreed "full-heartedly" that continuous improvement can advance educational equity:

> *It's what inspired me to continue to learn and continue to advocate for [continuous improvement] to happen across the state . . . . I believe the principles of . . . continuous improvement help us to dig under and not go to where we [are] normally headed . . . I believe that if we can get very strategic and thoughtful about how we approach [continuous improvement], if we get the right members around the table and really dig into those difficult conversations [about equity*

Promising practice: Disaggregating data by student identity characteristics

A key tenet of continuous improvement is to see, understand, and reduce the undesirable variation that a system produces. In the context of continuous improvement to advance equity, education leaders pointed to the practice of disaggregating data by student identity characteristics as an essential early step. One county office leader recalled, "The release of the California School Dashboard in 2014 really brought [equity] home to everyone." The California School Dashboard publicly displays student outcome data, disaggregated by student groups. When reviewing data this way, this leader explained, "It was just so clear what inequities exist within our educational system."

Leaders also discussed how looking at student data can serve as a starting point for investigating and analyzing the root causes of inequities in the system. As the county office leader noted, once stakeholders see inequities, the next steps are to "peel back the onion" and to ask why these inequities exist.

Interviewed leaders cautioned that while disaggregating data by student demographics is an important step, it is just the beginning of using continuous improvement methods for equity. Some education leaders expressed concern that some educators mistakenly believe that data disaggregation is the entirety of what using continuous improvement for equity means.

> *and] have the leadership, especially at the superintendent and central office [levels,] . . . to be able to put in those governance practices and those systems at the district level, you can see tremendous change.*

According to our interviews with education leaders, continuous improvement can also help practitioners understand how inequities are reproduced and supported by policies, practices, and processes within their systems. One TA provider described why it matters that continuous improvement helps practitioners "see the system":

> *Issues of inequality and injustice and racism [in education] operate predominantly through the fabric of interconnected and interrelated parts [in a system] that play out in such a way that they produce and reproduce many of the inequitable outcomes that we observe.*

This TA provider went on to describe how individual acts of racism are a "fraction of the contributing factors to what is ultimately producing the educational inequality that we are fighting," and that, thus, continuous improvement, with its focus on systems, is "necessary and essential in fighting educational inequities." As this TA provider suggests, seeing the system allows practitioners to move beyond merely identifying individual biases, to becoming more broadly aware of the systemic and institutionalized racism that frequently goes unnoticed. Continuous improvement holds the power to illuminate systems by providing opportunities for deep and meaningful inquiry into the causes of inequities in student experiences and outcomes.

Promising practice: Equity audits

Educational equity audits were identified as a promising practice for understanding and dismantling structural inequities in schools and school districts. In California and in states across the country, TA providers and county offices of education are using equity audits as a way to help educators better understand, or "see," their systems, with a particular focus on better understanding inequities in access, opportunity, and outcomes by student groups. Results from equity audits are then used to inform improvement efforts.

Equity audits cover a range of topics. Moreover, depending on the TA provider and the areas of focus, those conducting the equity audit may employ different protocols. For example, in 2018, San Rafael City Schools partnered with the Education Trust West and the Marin Promise Partnership to conduct an equity audit of students' career and college readiness, with a focus on access and success (e.g., A–G enrollment and completion and academic supports for English learners) in the district (Education Trust West, 2019). Other districts may focus on, for example, discipline rates by student groups, or teacher behaviors that encourage an equitable classroom.[2]

One county leader interviewed for this study noted their use of equity audits in their support for districts as part of the continuous improvement process. Specifically, equity audits are used to guide the collection and analysis of data, with a specific focus on differences in experiences, opportunities, and outcomes across student groups. This county leader noted that equity audits have helped leaders to navigate difficult terrain as they attempt to uncover inequities in their systems: "[District leaders] feel very uncomfortable, and they don't have the data to support necessarily what they're trying to do, and that's what I love about the equity audits. Our dashboard is great, but it does not give you the in-school, in-classroom assistance approach to a school." For example, the county leader noted that equity audits help to describe the experiences of African American students and "what's going on for them in schools," based on interviews with students. The county leader also observed that equity audits can lead to improved outcomes for students, noting a reduction in suspension rates in one district.

2 See https://maec.org/res/tools/ for a range of examples of equity audits (Mid-Atlantic Equity Consortium, 2020).

Amplifying the voices of stakeholders experiencing the system

Many education leaders interviewed for this study noted the potential power of continuous improvement to amplify the voices of those who are traditionally underserved by institutional policies and practices and who have been previously left out of, or not listened to in, efforts to improve schools. As one leader shared:

> *If we believe in this idea of [continuous improvement] being systems focused, then we would believe in having a much broader group of folks that are at the table, that [are] able to share their perspectives or their experience of being a part of and working in the system . . . I think, right now, the people that are the problem solvers . . . are a very small slice of the system, and that . . . parents and families, especially those from underrepresented communities, need to be in the conversation, to give an assessment of what their experience is, and then also inviting them to the table to be problem solvers. [Continuous] improvement, when done well, does all of that.*

As this leader suggests, meaningful engagement of stakeholders should go beyond traditional notions of involvement, in which opportunities for input are generally provided in infrequent, isolated instances, and in which students, families, and other stakeholders are often asked to agree on decisions that have already been made. Rather, with continuous improvement, meaningful engagement of stakeholders means that those who are directly impacted by the system become problem solvers in the work, helping leaders to understand the root causes of inequities and creating direction for improvement efforts. As one county leader noted:

> *We sometimes get bombarded, as educators, with a lot of programs we need to implement before really finding out what it is that the clients we're serving — the students, the families, the community — really need. So, I think that continuous improvement really helps inform educational equity in that way.*

A state leader similarly noted the value of continuous improvement for providing opportunities for input from a range of stakeholders, including parents and students, into the improvement process. As this leader stated, "One of the most powerful places that this work can have an impact is in the development of voice. I believe that [continuous improvement] really is, for me, a new take on what it means to bring multiple people to the table." For example, the leader described how empathy interviews can help decision-makers interpret quantitative data and learn more about students' real experiences:

> *[If leaders] say all students of some particular group are doing just fine, and then if you . . . go talk to the students about how they feel about the place [and discover otherwise,] you can say, "No, that's not true — this is how students are feeling." And all of a sudden, it becomes a warranted conversation. [Leaders can then discuss what they] think should transpire, what hasn't transpired but should, and talk about [the problem] . . . in concrete terms. You can point to some evidentiary base of what you think should be happening on the ground and what students truly need.*

Promising practice: Empathy exercises

One of the most commonly discussed types of continuous improvement practice to advance equity was empathy exercises — in particular, empathy interviews. Empathy exercises are drawn from the field of design thinking (Hasso Plattner Institute of Design at Stanford University, 2010), and they employ tools and practices for understanding the experiences, perspectives, and emotions of those who are directly impacted by the system in question (Skaggs, 2018). One leader explained why this work of understanding is critical to the work of improving equity:

> *In order to find out what is it that [students] really need for their specific situation and not just transpose what we think they need . . . really knowing what's best for the local community has to start with getting to know that community. . . . Not listening to respond, but listening to understand.*

Interviewees discussed how, through empathy exercises, members of their organizations gained an understanding of the experiences and perspectives of the people — often students or teachers — whom they wanted to serve better. Some cautioned that, without efforts to build empathy for the experiences of students, families, educators, and other stakeholders, school and district leaders would design solutions based on assumptions, rather than on the experiences and expertise of the people whom they wish to serve. One interviewee explained, "Empathy is the first step to getting toward equity. . . . It's impossible to meet the needs of a person without understanding them."

At one school, all teachers involved in continuous improvement efforts conduct empathy interviews with students they are concerned about. A leader at that school shared, "Empathy interviews are the best way to personalize and get people super invested in the process." The leader described the rich data that empathy interviews yield in providing students' perspectives, which they believe are a fundamental part of continuous improvement work: "If you are not doing empathy interviews, you are not doing improvement."

As the leaders interviewed for this study note, continuous improvement has the potential to create opportunities for a range of stakeholders to participate in the work of school and district improvement in important ways. Stakeholder participation can be leveraged to lead to more meaningful change. Continuous improvement also helps ground system improvement efforts in the lived experiences of students, families, educators, and other stakeholders who are impacted by inequitable systems.

Shifting mindsets

Education leaders have noted the critical need to shift mindsets and to change the cultures of organizations in order to effectively engage in continuous improvement (Hough et al., 2017). One TA provider noted that the ability to focus on inequities in a system frequently requires a shift in mindset among practitioners, including pushing them to address their possible individual biases and racism:

> *At its foremost, [continuous] improvement is about shifting mindsets. I think it's mindsets about learning, but also mindsets that are related to views about race, institutional racism, and those sorts of things. And I think, when you're doing improvement, you are making certain things transparent in the system, and you're holding . . . a light on them in a way that you aren't turning away from what is potentially hard to see.*

Promising practice: The "equity pause"

While interviewees mentioned empathy exercises and attending to variation in data by student groups as important continuous improvement strategies in making progress toward educational equity, they also discussed how the typical uses of many continuous improvement practices and tools do not encourage explicit attention to equity issues. At times, they asserted, typical use of continuous improvement practices can enable people to avoid tackling complex issues of equity, and can reproduce the status quo. To address this concern, a few interviewees talked about a practice known as an "equity pause," which they believe is a useful tool for infusing equity consciousness into existing continuous improvement practices.

An equity pause is a moment in a discussion or process when participants reflect on their team dynamics, question how a team is addressing equity, and critically examine their own assumptions. The use of equity pauses has been piloted at High Tech High Graduate School of Education, a graduate school in San Diego that is leading improvement networks. One interviewee described the value of equity pauses during team discussions, noting that this practice helped the team ask themselves, "'How are we working with colleagues to ensure the system is changing, and not trying to mold the kids into the system that already exists?' . . . There was an important piece in which we had to stop and have a dialogue about it." This education leader described how the equity pause would "interrupt" the team's thinking and "[help] us try to be less attached to our plans and make space for dialogue to occur when it needs to occur, even when we might not have anticipated it."

Similarly, another respondent described how the equity pause is a "consistent approach to slowing down . . . so that we can interrupt some of that hegemonic practice that treats our behaviors as just a given . . . and try to slow down enough to interrogate that." Respondents thus identified the equity pause as a valuable tool to prompt improvement team members to reflect on their assumptions and challenge norms that contribute to inequity.

Leaders noted that continuous improvement also requires a shift in mindsets about who is involved in system improvement efforts. Traditionally, improvement efforts defer to system leadership or to outside TA providers. Continuous improvement methods, on the other hand, prioritize all voices in a system, with the aim of designing better systems with and for those impacted by the system (e.g., students, families, educators).

Promising practice: Including historically underserved voices in continuous improvement work

Interviewees pointed to the importance of considering who is included and whose voices are represented in continuous improvement efforts. They raised the importance of having those who are directly impacted by the system included in discussions, beyond merely being the subjects of empathy interviews. Rather, they said, a broad range of stakeholders should be involved in all stages of improvement work, including helping to design potential solutions to the problems. One TA support provider explained, "[If] we believed in the idea of a systems focus, then we would believe in having a much broader group of folks at the table to share their experience of being a part of the system." Without broad contribution of stakeholder groups, interviewees argued, their understanding of the system would be incomplete, and the systemic improvement efforts would be incomplete.

While there were numerous comments about the importance of engaging multiple stakeholders in the work of continuous improvement for equity, interviewees varied in their conceptualizations of how this engagement would transpire. Some spoke of engagement in the sense of leaders hearing the voices of community members in an ongoing way. For others, having diverse representation in the work mattered greatly for the ability of continuous improvement to advance equity. In response to a question about what advice they would give to an educational organization engaging in continuous improvement for equity, one interviewee remarked, "It's really being intentional about the teams that you first select to lead this. Know that the people who you're going to train . . . to be the trainers of trainers need to be representative of the entire stakeholder community."

A county office leader asserted the need to listen to stakeholders who can bring "nontraditional ways of thinking" about possible solutions to problems that are being addressed. This leader explained, "For me, learning from the work of family and community partnerships, learning from the work of community organizing, learning from the work of some of the anti-racist policies around housing . . . that is part of the conversation I would like to see more."

Barriers and Challenges

While nearly all of the education leaders interviewed for this study responded positively when asked whether they believe that continuous improvement can potentially help improve educational equity, most of the interviewees qualified their responses with the conditions that are required, or the challenges that must be overcome, for this potential to be realized. During the interviews, leaders identified what they perceived as the greatest barriers and challenges to using continuous improvement to advance educational equity. Four primary themes emerged: continuous improvement can be oversimplified and can lack attention to equity; equity work is emotional and complex, and requires time, trust, and personal investment; the conditions for continuous improvement to advance educational equity are not in place; and professional learning and capacity-building opportunities to support continuous improvement to advance equity remain inaccessible and insufficient.

Continuous improvement can be oversimplified, be interpreted as a compliance activity, and lack attention to equity

Although there was overall agreement among interviewees that continuous improvement has the potential to facilitate meaningful systems change and advance educational equity, many education leaders expressed concern about how continuous improvement methodologies are often applied.

Continuous improvement can become a compliance-based activity

Several of the leaders interviewed for this study identified instances in which continuous improvement was misunderstood or misused in a way that negated its potential for improving equity. Specifically, system leaders noted that continuous improvement methods cannot advance equity when these methods are only engaged with in a rote way. One leader discussed how engaging in continuous improvement methods from a compliance orientation removes the possibility of truly improving equity:

> *The way that improvement can fall short radically is that it becomes a thing on a checklist. It becomes "What I do because you tell me to do it." . . . Improvement is all about disciplined inquiry in one form or another. One form of these is PDSAs [Plan-Do-Study-Act cycles] . . . People can start to do a PDSA and say "Check! I've done a PDSA." And once you go to that place, I think it's really possible to forget what got you there in the first place . . . it's all about attending to purpose, and once you stop attending to purpose, bad things can happen.*

Another leader described the difference between going through the motions of continuous improvement processes and approaching the work with an intentional equity lens. Some individuals might approach each continuous improvement process as "just a technical chore" to complete, but "if you are doing it from an equity lens constantly, then

you're not just doing the chore to get that spreadsheet done . . . you're actually addressing the gaps." Poor implementation of continuous improvement can have the undesirable effect of replicating and reinforcing systemic inequities and undermining efforts to convey the value of continuous improvement practices.

Some education leaders traced the lack of attention to equity in some continuous improvement work to the white male–dominated perspective from which quality-control methods emerged in the early to mid-twentieth century, including prominent thinkers such as W. Edwards Deming, Walter Shewhart, and Joseph Juran. These earlier works are a core influence on today's continuous improvement in education. Some interviewees described this earlier perspective as producing rigid and overly structured methods for system improvement, with very linear cause-and-effect assumptions about change. An overemphasis on improvement methods, leading to linear thinking about change, is of particular concern to practitioners who believe that addressing entrenched systemic equity issues requires a deep understanding of, and attention to, the explicit, semi-explicit, and implicit conditions of complex systems. One leader explained, "Equity issues are complex problems . . . I'm talking about how you think about problem solving, decision-making, and taking an action." This leader went on to explain that when individuals apply continuous improvement methods with insufficient understanding of the equity issues that they are seeking to address, they will erroneously expect to solve complex equity issues with an overly simplistic and rational "cause-and-effect" approach.

Equity work is emotional and complex, and requires time, trust, and personal investment

Continuous improvement can be influenced by personal bias

Continuous improvement methods begin with system investigations, which can be influenced by individual mental models. As one leader noted, "Even though continuous improvement says, 'See the system,' I think we have a different definition of what it means to 'see the system.' Particularly, part of it is around the narrative, the narratives, that people are holding about what they think is going on in their system." These narratives influence how systems are investigated and how problems are defined. As several leaders shared, individual biases may lead to improvement projects that address symptoms, rather than root causes, of problems.

Several interviewees made the point that, to address inequities in complex systems, system leaders first need to understand their own biases and their own roles in these systems, and that these biases and roles can be difficult to confront. For example, one education leader shared:

> *In terms of equity, it really is a personal journey that I feel all of us in education should be involved in. . . . It really takes that looking in the mirror to see what we have in terms of our own life experiences, our own biases as educators, that could be impacting how we are interacting with and supporting our students.*

Another leader described how important it is to

> *understand how our individual biases impact the decisions that we make. Figuring out, what are the things we keep doing without questioning and why haven't we questioned them? Whether it be policies or procedures that we have that we've never questioned, this is a good opportunity to start questioning, "Why do we continue to use these inequitable policies or procedures?"*

Using continuous improvement to advance educational equity requires practitioners to interrupt and address unproductive conversations about students, families, and staff, and to investigate points at which adults within the system need to change behavior. As one leader noted, individuals and groups will have to "deal with the fear and anxiety" provoked by "interrogating their own assumptions and mental models in a continuous

improvement process." Another education leader similarly noted:

> *I would say the most challenging part [of this work] deals directly with the human aspect of it. And I'll be explicit . . . when we start talking about feelings around race, and feelings around the potential of students, based upon their ethnicity or their poverty, or lack thereof, it starts to get very emotional . . . When you start doing that kind of work using continuous improvement, it's very, very challenging, because [there] begin to be those feelings of being uncomfortable or those feelings of guilt.*

Several leaders interviewed for this study cautioned that, by itself, continuous improvement as a methodology is insufficient for addressing systemic inequities and structural racism. Rather, the strength of continuous improvement for addressing equity lies in the mindsets and approaches of those who carry out improvement work. As one leader shared, describing their efforts to change mindsets among staff within their system, "We've had to dispel the idea that there weren't equity issues [in our system]."

Another leader similarly noted, "Everyone says, 'Oh, [continuous improvement] is about the system — but it's [also] about the people within that system." Accordingly, those leading continuous improvement must attend to their own individual biases, histories, and identities and how those influence improvement efforts. Those who are coaching leaders on improvement work should help equip leaders with the skills to do the difficult work of self-reflection and interrogation of their personal beliefs, while supporting reflective conversations with staff and stakeholders.

Conversations about race and class can be emotionally sensitive, and require time, trust, and safety

Addressing equity issues in education settings requires holding difficult conversations about experiences, mental models, and beliefs (Kania et al., 2018). Having these sorts of courageous conversations — such as conversations about race and class, for example — takes trust. Establishing trust increases the likelihood that individuals will take risks, and it increases the likelihood that reform initiatives will diffuse broadly (Bryk & Schneider, 2003).

The importance of having courageous conversations in continuous improvement work to advance equity was echoed by education leaders interviewed for this study. As one leader noted, "A continuous improvement process always involves difficult conversations and courageous conversations. There is a human element to the process — so if there is not trust or trusting relationships built within the team, then the continuous improvement process isn't going to help." Another education leader similarly noted, "The tools are really nothing unless you have a team that can self-reflect and trust [one another] . . . to have the hard conversations." This education leader observed that, in some instances, such conversations are avoided and, as a result, equity is not addressed.

In addition, having these difficult conversations can take time. One interviewee shared that "having enough time to really go to the level of depth with districts [and] teachers to have the conversations" can be challenging. This interviewee also shared that, although "equity is front and center" in their work, "it takes a lot of time to go deep into this work and have hard conversations." Another education leader similarly noted:

> *I talked earlier about mindset and how difficult it is for people to go through this [equity work] and be self-reflective and realize they're part of the problem. Sometimes people aren't willing to do that . . . Some of them are really just focused on driving very quickly to solutions . . . At the end of the day, I think, for equity, we need to change mindsets, and we need to really be able to understand what equity is and what exists currently, and grasp the fact that we're all part of that. We all created this system, and we all have biases, whether or not we want to admit it . . . and that's hard work, and it takes time.*

Unfortunately, unless education leaders are intentional about carving out time for improvement work to advance equity, getting to the level of depth necessary for the work to be successful can be difficult.

Equity work is also emotional, and, for some individuals, it can bring up disbelief, defensiveness, or trauma from past or ongoing experiences (DiAngelo, 2011; Singleton & Linton, 2006). Effective equity work requires a safe environment and sufficient time for participants to process emotions. Accordingly, several education leaders noted the importance of psychological safety, which can be either a barrier or a catalyst to courageous conversations. *Psychological safety* is defined as a sense of being able to show yourself without fear of negative consequences to self-image, status, or career (Kahn, 1990). Accordingly, accounting for the emotional dimension of continuous improvement to advance equity, and working to create the space, time, and conditions for difficult conversations to take place, is critical to the success of this work.

Conditions for continuous improvement to advance educational equity are not all in place

Continuous improvement processes require a range of conditions for success. These conditions include having the following: policies, practices, and resources to support improvement efforts; trusting relationships; a willingness to include all voices; learning dispositions; and equity-driven mindsets. Leaders interviewed for this study noted the difficulty of ensuring that these conditions are in place.

There are often insufficient use of data and lack of access to the "right data"

At some point during their interviews, almost all of those interviewed talked about data use or data availability as being central to equity. However, data use and data access are often difficult aspects of a continuous improvement effort (Park et al., 2013). Reflecting on what it takes for continuous improvement to advance educational equity, one education leader shared that districts need to have access to quality data to make decisions, and that, "depending on where you are [located] in the state, that is an issue." Another leader stated, "One of the disconnects is when there are student groups less than 30. It's as if [the students] don't exist [because the data are not reported by the state]. We dig into local data, but I'd love for [statewide data] to be part of the conversation with smaller schools."

Some leaders also noted the need to build districts' capacity to use data to measure and indicate improvement across schools. For example, one district leader described the difficulty of using data to

> *compare different types of schools across the district. I think we're still trying to figure out how to do that and tell the story of the complexity of quality. [For example,] kids that are moving to grade level, and then kids who may not be at grade level, but you're able to see that the school is on the move. Because, look at how much growth . . . we want to be able to value, and we want to be able to highlight, schools that are moving the needle for kids. And that's often lost because there's so much data.*

The same leader also shared that, if data are not presented in a usable format, parents and community members can have difficulty understanding improvement in the district.

In addition, the data that the district currently collects or distributes may not be sufficient to inform improvement efforts aimed at advancing educational equity. Continuous improvement for equity requires data beyond test scores, attendance, and graduation rates in order to answer equity-related questions. For example, one leader described their district's attempt to understand why some groups of students were underperforming in math. The district used surveys to learn from teachers and students about their experiences regarding math. The leader said that the survey "data confirmed that teachers did not believe that

their students would ever be successful." This information shaped the way the district approached its improvement efforts for math. Conducting surveys or other similar efforts to collect data that are not already available requires additional time, resources, and research capacity among staff, which can be challenging for schools and districts.

Systems may not be designed or organized to support improvement efforts

Interview findings indicated that improvement efforts require time, routines, and resources to see the efforts through. As one leader noted, "The continuous improvement process is complex and abstract, not easy to understand, and it takes time to change mindsets. Our system is not set up for the time and resources to [do this work]." In most cases, the conditions to support improvement efforts are not in place when improvement efforts begin. Leaders "need to understand how to build systems," and "budget to support this work."

Study findings also indicate that many improvement efforts have been unsuccessful because they have been led by individuals, rather than being led by teams and integrated throughout the system. One leader felt that continuous improvement efforts would continue to fall short because of staff turnover:

> *We start and get going and get some momentum, and then there's a change. And so the implementation, and, I would say, the execution, is the area for a lot of growth and development . . . When you think of the turnover in the district, it takes time to develop those habits for people to know how you show up in [a] meeting.*

Accordingly, systems and resources need to be organized and aligned — before and during improvement efforts — to create the space, time, and structures that are necessary for continuous improvement to advance equity.

There are not sufficient professional-learning and capacity-building opportunities to support continuous improvement to advance equity

To facilitate and sustain continuous improvement to advance equity in schools and districts, capacity must be built across the system. During interviews, several leaders shared concerns that continuous improvement training opportunities are often limited to TA providers, county office staff, and district office staff, and do not reach schools. Leaders also expressed concerns about how thoroughly and effectively continuous improvement trainers integrate equity into their training sessions.

There is limited access to professional learning opportunities

Most continuous improvement training opportunities are offered at the state, regional, or county levels and use "train-the-trainer" models. Coaches and facilitators who complete these training sessions are then expected to provide broader support to school districts and schools. Training participants are often county office leaders or district coaches or administrators who have some distance from the classroom. The current professional learning opportunities in California have had the unintended consequence of limiting the diversity of district roles and the diversity of individuals receiving firsthand continuous improvement training. One leader noted that this model, in which the training is experienced by those at the top of the district hierarchy, "perpetuates the disconnect in the system we are trying to transform." This model can also create a distance between decision-makers and those who will be required to do most of the work. As another leader shared:

> *One of the greatest barriers [to continuous improvement and equity] is getting the work to the local level. We need to come up with a way to get continuous improvement for equity to operate locally, and there is a need to show folks in a local context how it is helpful. Some educators see this as more work, but how can we show how this isn't more work? Or how*

can we show it is a little more work, but we can get better results for the kids?

Other interviewed leaders suggested the need to build the capacities of people leading improvement efforts to meaningfully attend to equity issues. As one county leader noted, "we're finding [that there is a need for] finding the actual capacity of people to do the actual work."

Continuous improvement learning opportunities often include little to no focus on equity

There is no general agreement about what it means to "do equity work" in education, and education leaders cautioned against the assumption that, by engaging in continuous improvement work, educators are automatically engaging in equity work. Several leaders noted there is a lack of attention to equity in continuous improvement discussions. Some interviewees explicitly reported that the continuous improvement learning opportunities they attended did not often include equity-focused content, and that, if these opportunities did address equity, it was often limited to including diverse perspectives while doing systems-investigation work. One leader shared their experience at a multi-day learning session for continuous improvement, explaining that the attendees

virtually never were provided reference to educational equity, and certainly not in the handful of instances where it might have come up randomly. We were not provided any explicit effort to try to pursue educational equity in any way through this approach to [continuous improvement].

Such a lack of explicit discussion promotes the separation of continuous improvement methods from educational equity work. As another leader noted:

If we are not naming how historical inequities for our most marginalized students and families are still showing up today, in 2019, and doing a deep analysis of other issues outside education, whether they be social-political, whether they be around housing, issues of poverty . . . I don't feel I'm hearing that a lot in spaces where continuous improvement is being introduced or explored. I think what I hear is more of "it's important to understand the system you work in, and here are some tools to understand your system."

As this leader describes, creating more equitable education systems requires also attending to external factors that affect students' opportunities and outcomes. As another leader expressed, "It's like schools function outside of society, in a way, and that's contradictory to a lot of research. Society informs a lot of what happens in schools. It's a disservice when we are tunnel-visioned in this conversation and don't address that."

Organizations are engaging to different extents in continuous improvement to advance equity

The barriers and challenges identified by education leaders are likely impacting efforts to meaningfully connect continuous improvement and equity work. In fact, despite the value that interviewed education leaders placed on the potential of a continuous improvement approach to improve educational equity, few reported that their organizations have fully engaged in continuous improvement to advance equity. Although education leaders were selected for this study on the basis of the research team's knowledge of their work to advance equity through a continuous improvement approach, the leaders' descriptions of the degrees to which their organizations engage in continuous improvement for equity ranged considerably.

Education leaders frequently described challenges in their attempts to bring continuous improvement and equity efforts together in their organizations. For example, one county leader noted that they try to introduce continuous improvement and the resources and tools of continuous improvement in equity conversations, but noted that other county leaders and staff members are frequently not exposed to continuous improvement efforts or do not explicitly have equity and continuous improvement responsibilities as part of their work, and that,

furthermore, many of the conversations about continuous improvement and equity are occurring in isolation. As another county leader noted:

> *There have been some opportunities for us to get coaching, as employees here, around continuous improvement, [but] educational equity kind of sits separately. So we are all trying to figure out a place where they do intersect and inform each other. . . . I think that creating the space for us to understand [equity] better at a county level, and then have districts better understand it at their local district level, and then also what does it even look like at a school level . . . is important and part of the process. I will say it's a hard pitch for some people still, making that connection [between continuous improvement and equity].*

In addition to noting the difficulty of bridging continuous improvement and equity work in some organizations, education leaders also expressed the need to continue to build capacity among staff to use continuous improvement to advance educational equity. Several leaders reported that, to address this need, they have hired experts into their organizations or have contracted with external experts to support staff. However, experts who specialize in continuous improvement may not have deep training in how to approach equity work in a deep and meaningful way, and experts who specialize in equity may not have deep experience with continuous improvement. Furthermore, as one county leader noted, given how new continuous improvement is to many practitioners, and given how difficult it is, more extensive training may be necessary in order to do this work well:

> *Sometimes I've seen individuals come in, and they just begin to learn about continuous improvement, and [because] they might be learning . . . some introductory tools and some practices, they make the assumption that they're doing continuous improvement, that they've got it all wired. And it's just minimal, like a foot-in-the-water kind of thing. And so that's something that we're going to have to be careful about, making sure that people understand that there's a lot more learning to do.*

Only three of the interviewed education leaders explicitly noted that they have fully engaged in continuous improvement as an organizational strategy to move toward equity. In describing their work, these leaders focused on the ways in which continuous improvement to advance equity is built into all aspects of their work, across staff at all levels within the organization, and embedded into the ways in which they think about and carry out their work. For example, one leader noted that they base the organization of their work on the explicit pursuit of improving outcomes for students who are historically underserved and marginalized. Accordingly, they are trying to build capacity among educators through approaches to continuous improvement that "integrate an equity consciousness and an equity-centered approach to the work. . . . We're building out aspects of the systems that will allow for a deeper examination of the ways in which we are either contributing, perpetuating, and/or interrupting these inequitable outcomes."

Implications for the Field

Our interviews with education leaders in California suggest that continuous improvement has the potential to advance equity by providing a disciplined approach for education stakeholders to understand how their systems produce inequity, and to then determine how to transform those systems to promote equity. However, findings from this study also indicate that there are many barriers and challenges to carrying out equity-driven continuous improvement work, and that few organizations are fully engaged in continuous improvement to advance equity.

A review of literature revealed that research that directly addresses the connection between continuous improvement and equity is limited. Perhaps unsurprisingly, existing strategies, tools, and practices to intentionally and meaningfully use continuous improvement to advance educational equity are either limited or not widely known.

Our findings also highlight a strong belief, among the interviewed education leaders, in the promise of continuous improvement to advance equity in order to transform systems. At the same time, leaders warned that continuous improvement, like any process, can reproduce inequity if it is not explicitly practiced in ways that acknowledge and address disparities in student experiences and outcomes. This study's findings have a range of implications for the future of education reform and improvement efforts in California.

Building system capacity for continuous improvement to advance equity

One common theme across the interview findings was the need to build system capacity to effectively implement continuous improvement efforts to advance equity. According to interviews with education leaders, implementing continuous improvement to advance equity requires focusing on our individual roles as improvers, through noticing and reflecting on our own biases and assumptions. It also requires engaging all system stakeholders (e.g., students, families, educators) as experts on what is contributing to inequity in education systems and on how to make these systems better. Continuous improvement to advance equity can be enacted through the thoughtful use of specific tools and protocols (e.g., equity pauses, empathy exercises). Some of these tools and protocols already exist, while others are still being developed and tested. Finally, successful implementation of continuous improvement to advance equity requires adopting a systems perspective that is grounded in the knowledge that systems produce inequities, which need to be identified and addressed.

Therefore, system improvement efforts must focus on both implicit factors (e.g., individual biases) and explicit factors (e.g., inequitable funding) in the education system. Currently, many continuous improvement training opportunities lack an explicit focus on equity. Rather, opportunities for professional learning in continuous improvement and in equity are often provided separately. Creating opportunities for education leaders to build knowledge and skills on how to facilitate and coach for continuous improvement to advance equity is fundamental to its success.

Leadership

The study findings indicate that those in education leadership positions need specific skills and dispositions to lead continuous improvement to advance equity. These skills and dispositions include basic knowledge about continuous improvement methods to advance equity; comfort with distributed leadership across roles in a school or district system to lead improvement efforts; trust in the abilities of students, families, and educators to identify system breakdowns and generate ideas for change; and a recognition of the expertise that students, families, and educators have and that those in leadership positions do not have. Continuous improvement to advance equity also requires that leaders are comfortable, willing, and able to examine their own beliefs and biases, and to reflect on how their beliefs and biases impact their roles and their abilities to influence improvement efforts. Finally, leaders must have the skills and the will to help make the invisible visible in their system, even when previously unseen truths are difficult to face. Investing in the development of these skills and dispositions has the potential to help school and district leaders be better able to set the conditions for continuous improvement to advance equity in their districts, schools, and classrooms.

Equitable access to learning and support

The study findings also suggest that access to learning about how continuous improvement is carried out is itself an equity issue. Most continuous improvement training sessions in California are exclusive to state, regional, and county office leaders. Moreover, continuous improvement conferences generally recruit state and local education agency leaders, researchers, and TA providers, and have limited representation from school principals, teachers, students, families, and community-based organizations. In general, the interviewed education leaders described how continuous improvement learning is not making its way to schools and communities. This is problematic given that in order for continuous improvement to advance equity, it must prioritize student, family, and teacher engagement in improvement efforts, as well as the development of school and district leaders to lead and coach others on how to engage in continuous improvement for equity. The lack of learning opportunities for school and district leaders and stakeholders is a significant gap in the field of continuous improvement and, in particular, continuous improvement to advance equity. However, this gap represents possibilities for the field to design and offer continuous improvement to advance equity learning opportunities with and for school and district communities.

Leveraging existing frameworks and expertise

Our review of current literature on continuous improvement and equity revealed several initiatives and other efforts — led by universities, foundations, and TA providers — to develop and facilitate promising approaches to continuous improvement to advance equity (see Appendix B for further details about these initiatives and approaches). Further, interviews revealed that California education leaders are attempting specific continuous improvement practices — including empathy exercises, equity pauses, equity audits, and inclusive improvement practices — to advance equity in their organizations and in the organizations that they support. These developing initiatives and practices represent an important learning opportunity for the field, as researchers and practitioners continue to explore the intersection of equity and continuous improvement and attempt to apply continuous improvement to advance equity.

Measuring progress and understanding impact

As more practitioners engage in continuous improvement to advance equity, the field will have opportunities to learn about the impact of these efforts. However, as with any systems change approach, understanding the impact of continuous improvement to advance equity is more involved than relying on a set of long-term outcomes or lagging indicators, such as the indicators on the California Dashboard that are updated annually.

Understanding the full impact of these efforts on school and district systems requires looking beyond traditional indicators of school system success (e.g., standardized test scores), into more implicit indicators of system change, such as shifts in mental models and relationships, in addition to explicit indicators of change, such as shifts in policy and practice. Further, stakeholders who are typically left out of such discussions should be involved in the selection of meaningful measures, which ultimately reflect the values of the system. In general, the field has opportunities to design new ways of understanding the impact of school system change efforts, particularly efforts involving continuous improvement to advance equity.

There may also be opportunities to leverage existing measurement tools to capture data that reflect progress related to equity-driven continuous improvement. California's current accountability system measures school and district progress across a range of state and local indicators. Some of these indicators, such as indicators of parent and family engagement and local climate, may provide insight into how school districts are using continuous improvement to advance equity. For example, after they have been refined, family engagement and local climate indicators could provide quantitative or qualitative data on how families and students are involved in system learning and change efforts. Further, these data may help county offices of education and other TA providers identify opportunities to support school districts with continuous improvement to advance equity.

Providing differentiated assistance

California's system of support for school districts involves county offices of education providing differentiated assistance to school districts that are struggling to meet the needs of their students. County office leaders are using continuous improvement methods to support school districts with improvement efforts, and some county leaders are beginning to consider how they might apply a more explicit equity lens to their continuous improvement efforts with districts.

Accordingly, there are opportunities to support county leaders and other TA providers throughout the system to learn with and from one another about equity-driven continuous improvement practices, and about how these practices can be used to support California's school districts. As part of this work, system leaders can begin to develop and test strategies and tools for more meaningfully integrating equity into continuous improvement work so that promising approaches can be shared and tested more broadly across the state. Otherwise, the way in which differentiated assistance has been developed risks using merely technical approaches to continuous improvement, which may undermine these approaches' impact on equity.

Future research

This study explored how California education system leaders and TA providers are thinking about and applying continuous improvement to advance equity practices. However, we still know little about how equity-driven continuous improvement is experienced in schools and districts, including how students, families, educators, and school leaders experience it. Additionally, little is known about the impacts of equity-driven continuous improvement practices in schools and districts, including how these practices might be contributing to shifts in mental models, relationships, power dynamics, and practices in schools. Further research is needed to understand school- and district-based experiences and impacts, and to deepen understanding of the effectiveness of the existing initiatives and promising practices identified in this study.

Equity-driven continuous improvement, or continuous improvement done well

Finally, a foundational question that arose from this study was whether there is a need to define and explore a new or different approach to improvement — what one might term "equity-driven continuous improvement" — that extends beyond the existing processes, practices, tools, and mindsets of a continuous improvement

approach to more effectively address inequities in the education system. In other words, if continuous improvement is enacted as intended, is it sufficient to address persistent inequities in education systems — including structural racism and the marginalization of certain student groups — that lead to unequal outcomes, or is something more needed?

If current continuous improvement approaches are inherently insufficient for understanding and dismantling persistent inequities in education systems, then further research and practice is necessary in order to construct and refine approaches and practices that are specifically focused on equity-driven continuous improvement. For example, the barriers and challenges identified by the interviewees in this study suggest the need for practices that go beyond the standard continuous improvement sphere, including work to confront one's own biases, and learning to lead potentially challenging and emotionally fraught conversations about race.

On the other hand, our interviews also revealed some promising practices that organizations are using to advance educational equity through a continuous improvement approach. Two of these practices — disaggregating data by student groups and conducting empathy interviews — could be considered core practices of continuous improvement. In other words, perhaps the shortfalls in current efforts to address educational equity through a continuous improvement approach are due to deficiencies in how these practices are applied across the state, rather than deficiencies in the practices or in the approach.

Taken as a whole, the interviews suggest that equity-driven continuous improvement necessitates that system leaders build on a foundational principle of continuous improvement — that systems are designed to produce the outcomes they get — by developing intentional practices that allow for more meaningful integration of equity work and continuous improvement. Further study on this topic provides an opportunity to interrogate more deeply the need to define and develop a new approach to "equity-driven continuous improvement" or to strengthen existing continuous improvement approaches to ensure educational equity for all students.

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Appendix A. Methodology

Identifying and recruiting interview participants

Given that the topic of interest involves specialized knowledge and particular experience, the WestEd team was intentional in selecting 21 participants who represented a variety of education entities and regions across California.

The team first developed a list of potential interviewees, based on the team's knowledge of organizations and individuals that are actively involved in continuous improvement and implementation of education equity efforts. The list of potential interviewees included education leaders from state-level agencies, county offices of education, districts, schools, community-based organizations, and TA providers (see Table A1). The county offices of education represented areas with varying population densities and included one large county, five medium-size counties, and two small counties.

The WestEd team also used a snowball sampling method, by recruiting additional participants that interviewees recommended. The team included in its interview protocol a question asking interviewees for recommendations of individuals to interview.

Table A1. Number of participants, by education entity

Education Entity	Number of Participants
CBOs/TA providers	6
Schools	3
County offices of education	9
Districts	1
State-level agencies	2
Total	21

Interview procedure

An email invitation was sent to the identified education leaders, to introduce the study and to invite them to participate in an individual hour-long interview in which they would be asked questions regarding their experiences with taking a continuous improvement approach to support their education equity efforts. Once participants agreed to take part in the interview, they were emailed a calendar invite with a link to participate in the virtual interview, which took place through the Zoom videoconferencing platform. Interview questions were shared with participants beforehand upon their request.

Anonymity and confidentiality were established to provide a space in which interviewees could speak freely and openly. Interviews were recorded and transcribed. Two WestEd team members were part of each interview. One team member asked the questions, while the other took notes; team members sometimes alternated between asking questions and taking notes. Notes were taken in shorthand, and were verified for use in this paper by referring back to the audio or video recording.

Interview protocol

The interview protocol was developed by the WestEd team after they conducted a literature review on continuous improvement and education equity. Fifteen questions were developed, and the questions were segmented into four categories:

1. **Background:** Participants were asked about their experiences using continuous improvement for educational equity.
2. **Defining educational equity and continuous improvement:** Participants were asked to define educational equity and continuous improvement in their own words.
3. **Applying continuous improvement for educational equity:** Participants were asked to describe how they take a continuous improvement approach to address educational inequity issues.
4. **Learning and building capacity to use continuous improvement for educational equity:** Participants were asked about challenges and about their advice for others who want to take a continuous improvement approach to education equity.

Data analysis

The WestEd team took a thematic coding approach to analyzing the interview transcripts to understand the extent to which interviewees' organizations were addressing educational equity through continuous improvement; interviewees' beliefs in the potential of continuous improvement to address educational equity; and the current opportunities and shortfalls of using continuous improvement to address educational equity. The interview notes for each question were divided among the WestEd team for analysis, and each question was analyzed by two members of the team. Quotes used in this paper were verified against the recordings or transcripts, to ensure that they were used accurately and in context, as intended by the interviewees.

Appendix B. Current Initiatives and Approaches That Bridge Continuous Improvement and Equity

Research on the use of continuous improvement to advance educational equity is currently limited. This appendix provides a brief outline of initiatives and approaches from the literature review that either define continuous improvement and educational equity or make connections between continuous improvement and educational equity. Some of the notable literature on this topic comes from recent initiatives and approaches attempting to connect continuous improvement and equity.

Continuous Improvement for Equity Project

There is not yet a substantial amount of literature connecting continuous improvement and equity. One notable exception is the work stemming from the Continuous Improvement for Equity Project, an effort funded by the Bill & Melinda Gates Foundation and led by national leaders in the fields of diversity, equity, inclusion, and continuous improvement. This project was launched to address the concern that continuous improvement efforts will fail to address inequitable systems and that, like any processes, they have the potential to reproduce inequity. It has produced a set of critical inquiry questions and a collection of curated tools to help educators and stakeholders lead efforts in continuous improvement to advance equity. The critical inquiry questions align with various steps in the continuous improvement process, drafted through an equity lens (Continuous Improvement for Equity Project, n.d.).

Merging design thinking with equity work

In the literature review, we encountered three approaches or initiatives that merge design thinking with equity work. Although design thinking is distinct from continuous improvement, we discuss these approaches and initiatives because there is a connection between these two areas of work — notably, continuous improvement methods incorporate many design thinking tools, strategies, and approaches.

Liberatory Design Framework

The Liberatory Design Framework, developed through a partnership between the National Equity Project and Stanford d.school's K12 Lab (National Equity Project, n.d.), uses design thinking to explore power imbalances and inequitable structures that currently exist within systems. In this approach, system designers and leaders must recognize the inequitable structures that are already in place — such as educational tracks, assimilationist curricula, and inequitable resource distribution — in order to redesign systems to achieve more equitable outcomes (Stanford d.School, n.d.). The Liberatory Design Framework

also asks system designers to notice and reflect on their own roles, beliefs, and biases and on the potential impacts of those roles, beliefs, and biases on their design process and their end users.

EquityXdesign

EquityXdesign is a design thinking approach that aims to reduce the impact of racism and inequity on design processes, enabling more inclusive innovation (equityXdesign, 2016). The equityXdesign framework is organized by a set of core beliefs and design principles that prioritize historical context, inclusion and shared power in the design process, and equitable design practices, as well as raising awareness of designers' individual identities as designers and how those identities impact their abilities to design. EquityXdesign also prioritizes using discourse that creates opportunities for change.

Participatory Design Research

Participatory Design Research is a research process that builds community among researchers, schools, and historically underserved communities to enact social justice transformations in educational systems (Bang & Vossoughi, 2016). Within the umbrella of Participatory Design Research, co-design is an approach that calls for focusing explicit attention and effort to disrupt existing power dynamics that hinder progress toward equity, and reflecting deeply on participants' identities and history (Ishimaru et al., 2018). Co-design includes the stages of "a) relationship building [and] theorizing; b) designing/developing tools to support new relationships and theories of change; c) implementing our theories and practices; and d) analyzing and reflecting on our process for continued learning and innovation" (Ishimaru et al., 2018). The earlier stages of co-design include "in-depth, reciprocal" discussions, across participant groups, to share stories that lead to identifying actions. These discussions build on Indigenous methodologies that were designed to support the participation of Indigenous elders in ways that stand in contrast to traditional ways of "extracting knowledge" (Ishimaru et al., 2018).